

US009636097B2

## (12) United States Patent

# (10) Patent No.: US 9,636,097 B2 (45) Date of Patent: May 2, 2017

## (54) SURGICAL RETRACTOR WITH A LOCKING RETRACTOR BLADE

(71) Applicant: Tedan Surgical Innovations, LLC.,

Sugarland, TX (US)

(72) Inventor: Daniel Bass, Half Moon Bay, CA (US)

(73) Assignee: TEDAN SURGICAL INNOVATIONS,

LLC., Sugarland, TX (US)

(\*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 365 days.

(21) Appl. No.: 14/447,924

(22) Filed: Jul. 31, 2014

(65) Prior Publication Data

US 2016/0030030 A1 Feb. 4, 2016

(51) Int. Cl. A61B 1/32 (2006.01) A61B 17/02 (2006.01)

(52) U.S. Cl.

CPC ...... A61B 17/0206 (2013.01)

(58) Field of Classification Search

## (56) References Cited

## U.S. PATENT DOCUMENTS

1,607,788 A	11/1926	Atkinson
3,119,594 A	1/1964	Heggem
3,737,142 A	6/1973	Boswell et al.
4,976,403 A	12/1990	Bramblet

5,902,233 7,182,729 7,758,501	B2	5/1999 2/2007 7/2010	Farley et al. Abdelgany et al. Frasier	A61B 17/02			
7,750,501	22	712010	1145101	600/231			
7,850,608	B2	12/2010	Hamada				
7,887,482	B2	2/2011	Hamada				
7,922,658	B2	4/2011	Cohen et al.				
7,931,589	B2	4/2011	Cohen et al.				
7,935,054	B2	5/2011	Hamada				
7,946,982	B2	5/2011	Hamada				
7,988,625	B2	8/2011	Abdelgany et al.				
8,257,255	B2		Farley et al.				
8.298.139	B2		Hamada				
8,303,499	B2	11/2012	Hamada				
8,357,184	B2	1/2013	Woolley et al.				
(Continued)							

Primary Examiner — Matthew Lawson (74) Attorney, Agent, or Firm — Kramer Amado P.C.

## (57) ABSTRACT

A surgical retractor includes a retractor body and a retractor arm. The retractor arm includes a first portion configured to operatively connect to the retractor body, and a control assembly configured to control movement of a retractor blade. The control assembly includes a base member having a first opening and a second opening, and movable between a first position and second position. The retractor arm further includes a regulating member to control rotation of the base member and move through the first opening of the base member, a connecting member cooperatively connected to the regulating member, and a barrel member in operative slidable engagement with the second opening formed in the base member. Rotation of the regulating member in a selected direction moves a stem of the regulating member through the first opening thereby forcing the barrel member to slide along the second opening and the base member to pivot relative to the retractor arm between a first position and second position, thereby rotating a connected retractor blade.

## 15 Claims, 4 Drawing Sheets

